

Multimedia in Teaching

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Abstract – The progression of technology and global internetworking increased the possibilities to present lectures using various media. The multimedia is a vague term and often misinterpreted because of its wide applicability. E-learning is something which falls under umbrella of multimedia and it really shaped the way we teach today. This paper is addressing the use of multimedia in education by covering the advantages and disadvantages as well as providing the recommendations for proper use.

Index Terms – BlackBoard, Classroom, CD-ROM, E-learning



INTRODUCTION

The presentation of the lectures got into new perspective with the use of multimedia. Traditional teaching requires students to be present in the class, be prepared, stay focused during class period and take notes instantaneously in order to be productive. Instead of making these assumptions, multimedia offers much more flexible type of learning using animations, streaming videos, voice, etc. Moreover, the way of delivering these materials is what makes it special. In combination with the Internet, we use multimedia to create distance learning. This concept drastically changed the education. Of course, everything has its own advantages and disadvantages which we will discuss later.

Background

The term Multimedia was first use in 1966 by singer and the artist Bob Goldstein during the TV show. The various definitions available agree that multimedia is the combination of various data formats used to express ideas. These data formats are pictures, videos, text, animations, audio, applications and web. Now, it's important to note that

interactive multimedia is the continuation which includes user's direct interaction with multimedia presentation. This is mainly what we use in the teaching because we realized that passive teaching is not productive regardless of the data format.

One of the first delivery methods was CD-ROM. These devices make the multimedia material available to bigger audience and on remote locations. Before CD-ROM, floppy disks were not suitable because of their capacity since pictures, animations and videos require greater memory storage. USB drives increase the portability of the multimedia content. Today, the most used way of delivering such material is the Internet. Even though multimedia is used virtually everywhere (politics, military, sales, etc.) the paper will be focused on educational purposes.

The Influence of Multimedia Teaching

The use of multimedia in teaching offered new approach to present the material. Now, the same idea can be covered in different ways which may be more suitable for student's learning and efficiency. Some students are visual learners and some prefer text or audio. The content presented using multimedia is often categorized as linear and non-linear. Linear Multimedia presentations are recorded and do not require the student's interaction while non-linear require some kind of student's involvement. The good example for non-linear multimedia lecturing is integration of the quiz or comments section where the rest of the lecture cannot be viewed unless the requirement is satisfied.

The main reason for success of multimedia in teaching is the way we deliver material. We already established the requirements for traditional classroom teaching where we said that student's presence is mandatory as well as other factors. Now, multimedia can be shared in Web Portals, on sites, or simply delivered by email. From this, the new revolutionary concept is created called e-learning or distance learning. Namely, students are allowed to watch the lectures at their own pace, anytime. This is a huge advantage because it offers the flexibility over the time conflicts. Most of the students have dense schedule and this idea is the perfect solution for it. Moreover, students are able to interact with the material. For example, students are able to start-stop the lecture and take the time to understand the concept without fear of missing the point. The notes taken during e-learning are superior in every way and students can watch the lecture

on tablets, laptops, phone, etc. This phenomenon changed the education forever. In the next section, we will address the critical qualities and disadvantages of multimedia teaching.

The Advantages of Using Multimedia in Teaching

So far, we talked about the concept of using the multimedia in teaching and we realize that this technique introduces portability and flexibility, yet these are only some of the qualities. In addition, multimedia enhances “individualized learning, collaboration and a broader view of the world.”

Psychology research confirmed that we all learn differently and have different response to the material presented. This is why Individualized learning introduced by the multimedia is by far superior to traditional techniques. Now, the material is offered using different perspectives such as videos, games and quizzes. The personalization of it gives additional benefits.

Collaboration is also improved when using multimedia tools. The hardest task for the presenter is to make the class more active and encourage questions, yet we are aware that most of the time, student avoid to ask because they are already overwhelmed from the material or they are simply shy to stand up. These multimedia portals such as blackboard or classroom application, student have the rooms for different topics and they talk the problems or what fascinated them. Professor monitors the interactions and provides the input.

Since distance learning connects many different cultures, schools and communities, we can say that students learn in more global way. The only limit is the student’s curiosity. The learning resources are everywhere and they are shared between universities.

The Disadvantages of Using Multimedia in Teaching

Since the use of multimedia in teaching provides additional flexibility, the students may procrastinate the project and the homework. This is probably the most common issue where student’s organizational skills and determination is brought into a question. Next, even though the communication between student and professors is improved, yet it may not be immediate.

Some of the disadvantages which are often exposed are the expenses of creating and delivering the lectures as well as other practical issued such as that not all of the students are proficient with technology and using multimedia for teaching can slow them. In addition, not all professors are able to create and manage the multimedia content. The expenses for maintain the multimedia class vary and depend on the required equipment. One more disadvantage is the time spent of watching the lectures. Namely, if the student stops-starts lecture all the time, he/she may spend much greater amount of time. Another issue is the cheating. It is much easier if the student is using e-learning.

If we compare advantages with disadvantage, we can conclude that the use of multimedia in teaching is highly

efficient due to the fact that disadvantages are most likely not to happen.



The Proper use of Multimedia in Teaching

In this section, we will see the recommendations for teachers when using the multimedia. These tips are separated into 3 categories: Before class, during class and after class.

Before class, check for the design mistakes, material availability and technical side. The videos should be concise and time effective. Everything irrelevant should be cut. If its in-class presentation, make sure that the lighting is managed and the position of the screen so that all the students can have the same experience. Be sure that the time flow of the lecturing is preserved by bookmarking the links used in the lecture. Watch about the videos before the class to ensure that the video player does not need any additional installation.

During the lecture, introduce the topic and motivate student using their preexisting knowledge. Include question & answers section to create enhance the interaction, check for comprehension, clarify important points, monitor student’s reactions, etc. Teachers must encourage critical thinking about the topic by navigating student’s thoughts in right directions. After the class, create group activities based on the material and require the respond. This activity may be a hands-on task where students can demonstrate their knowledge.

Conclusion

The use of multimedia in teaching forever changed the traditional whiteboard lecturing and continues to shape the future. The evolution from classroom to the Internet gains in popularity and we may expect this to be the primary way of teaching in the future. Superiority and flexibility of multimedia goes in favor of the students and teachers. Currently, e-learning as a type of multimedia deliver method is widely used to train the employees and test them. Moreover, the use of multimedia does not have the limits and will continue to make affect our life and education.

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